

WHAT IS CLAIMED AS NEW AND IS DESIRED TO BE SECURED BY LETTER  
PATENT OF THE UNITED STATES IS:

1. A gateway apparatus connected to a telephone  
5 network and the Internet, comprising:

a facsimile communications mechanism configured to  
receive facsimile communications protocols and facsimile  
information from a calling facsimile apparatus coupled to  
said telephone network through said telephone network;

10 an Internet communications mechanism configured to  
transmit said facsimile information in a packet format to a  
called facsimile apparatus coupled to said telephone network  
via a different gateway apparatus through the Internet and  
the telephone network;

15 a memory storing data representing a calling facsimile  
number of said calling facsimile apparatus in association  
with a called facsimile number of said called facsimile  
apparatus; and

a communications controller configured to determine  
20 before establishing a line connection with said calling  
facsimile apparatus whether said facsimile number of said  
calling facsimile apparatus is registered in said memory as  
the calling facsimile number, to cause said different gateway  
apparatus to initiate a call to said called facsimile  
25 apparatus using said called facsimile number when said

facsimile number of said calling facsimile apparatus is  
determined as registered in said memory as the calling  
facsimile number, and to establish a line connection upon a  
receipt of an acknowledgement indicating the line is  
5 connectable from said called facsimile apparatus.

2. A gateway apparatus as defined in Claim 1,  
wherein said data stored in said memory represents said  
calling facsimile number of said calling facsimile apparatus  
10 in association with a plurality of called facsimile numbers  
including the facsimile number of said called facsimile  
apparatus, each of said facsimile numbers being previously  
designated with a time parameter, and said communications  
controller selects facsimile numbers from among said  
15 plurality of said called facsimile numbers based on said time  
parameter and additional time information corresponding to  
said time parameter so as to cause said different gateway  
apparatus to initiate a call to facsimile apparatuses using  
said selected facsimile numbers.

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3. A gateway apparatus as defined in Claim 2,  
wherein said time parameter includes arbitrary transmission  
start and arbitrary transmission completion times and said  
additional time information includes a call acceptance time.

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4. A gateway apparatus as defined in Claim 1,  
wherein said communications controller performs a new  
registration and changes the contents of registration in said  
memory in accordance with an instruction from said calling  
5 facsimile apparatus.

5. A gateway apparatus as defined in Claim 1,  
wherein said facsimile communications protocols includes G3  
facsimile protocols.

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6. A gateway apparatus as defined in Claim 1,  
wherein said packet format includes a TCP/IP packet format.

7. A gateway apparatus connected to a telephone  
15 network and the Internet, comprising:

facsimile communications means for receiving facsimile  
communications protocols and facsimile information from a  
calling facsimile apparatus coupled to said telephone network  
through said telephone network;

20 Internet communications means for transmitting said  
facsimile information in a packet format to a called  
facsimile apparatus coupled to said telephone network via a  
different gateway apparatus through the Internet and the  
telephone network;

25 storing means for storing data representing a calling

facsimile number of said calling facsimile apparatus in association with a called facsimile number of said called facsimile apparatus; and

communications controlling means for determining before  
5 establishing a line connection with said calling facsimile apparatus whether said facsimile number of said calling facsimile apparatus is registered in said storing means as the calling facsimile number, causing said different gateway apparatus to initiate a call to said called facsimile  
10 apparatus using said called facsimile number when said facsimile number of said calling facsimile apparatus is determined as registered in said storing means as the calling facsimile number, and establishing a line connection upon a receipt of an acknowledgement indicating the line is  
15 connectable from said called facsimile apparatus.

8. A gateway apparatus as defined in Claim 7, wherein said data stored in said storing means represents said calling facsimile number of said calling facsimile  
20 apparatus in association with a plurality of called facsimile numbers including the facsimile number of said called facsimile apparatus, each of said facsimile numbers being previously designated with a time parameter, and said communications controlling means selects facsimile numbers  
25 from among said plurality of said called facsimile numbers

based on said time parameter and additional time information corresponding to said time parameter so as to cause said different gateway apparatus to initiate a call to facsimile apparatuses using said selected facsimile numbers.

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9. A gateway apparatus as defined in Claim 8, wherein said time parameter includes arbitrary transmission start and arbitrary transmission completion times and said additional time information includes a call acceptance time.

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10. A gateway apparatus as defined in Claim 7, wherein said communications controlling means performs a new registration and changes the contents of registration in said storing means in accordance with an instruction from said calling facsimile apparatus.

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11. A gateway apparatus as defined in Claim 7, wherein said facsimile communications protocols includes G3 facsimile protocols.

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12. A gateway apparatus as defined in Claim 7, wherein said packet format includes a TCP/IP packet format.

13. A method of transmitting facsimile information from a calling facsimile apparatus to a called facsimile

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apparatus through the Internet using a packet format,  
comprising the steps of:

storing data representing a calling facsimile number of  
a calling facsimile apparatus in association with a called  
5 facsimile number of a called facsimile apparatus;

receiving a call from said calling facsimile apparatus,  
said call including facsimile communications protocols;

determining before establishing a line connection with  
said calling facsimile apparatus whether said facsimile  
10 number of said calling facsimile apparatus is registered as  
the calling facsimile number in said storing step;

initiating a call to said called facsimile apparatus  
using said called facsimile number when said facsimile number  
of said calling facsimile apparatus is determined as  
15 registered in said storing step as the calling facsimile  
number; and

establishing a line connection upon a receipt of an  
acknowledgement indicating the line is connectable from said  
called facsimile apparatus.

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14. A method as defined in Claim 13, wherein said  
data stored in said storing step represents said calling  
facsimile number of said calling facsimile apparatus in  
association with a plurality of called facsimile numbers  
25 including the facsimile number of said called facsimile

apparatus, each of said facsimile numbers being previously designated with a time parameter,

said method further comprises a selecting step for selecting facsimile numbers from among said plurality of said  
5 called facsimile numbers based on said time parameter and additional time information corresponding to said time parameter so as to initiate a call to facsimile apparatuses using said selected facsimile numbers.

10 15. A method as defined in Claim 14, wherein said time parameter includes arbitrary transmission start and arbitrary transmission completion times and said additional time information includes a call acceptance time.

15 16. A method as defined in Claim 13, wherein said storing step is performed in accordance with an instruction from said calling facsimile apparatus.

20 17. A method as defined in Claim 13, wherein said facsimile communications protocols includes G3 facsimile protocols.

18. A method as defined in Claim 13, wherein said packet format includes a TCP/IP packet format.

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19. An Internet facsimile system, comprising:

a gateway apparatus connected to a telephone network and the Internet, said gateway apparatus comprising:

a facsimile communications mechanism configured to

5 receive facsimile communications protocols and facsimile information from a calling facsimile apparatus coupled to said telephone network through said telephone network;

an Internet communications mechanism configured to transmit said facsimile information in a packet format to a

10 called facsimile apparatus coupled to said telephone network via a different gateway apparatus through the Internet and the telephone network;

a memory storing data representing a calling facsimile number of said calling facsimile apparatus in association

15 with a called facsimile number of said called facsimile apparatus; and

a communications controller configured to determine before establishing a line connection with said calling facsimile apparatus whether said facsimile number of said

20 calling facsimile apparatus is registered in said memory as the calling facsimile number, to cause said different gateway apparatus to initiate a call to said called facsimile apparatus using said called facsimile number when said facsimile number of said calling facsimile apparatus is

25 determined as registered in said memory as the calling



facsimile number, and to establish a line connection upon a receipt of an acknowledgement indicating the line is connectable from said called facsimile apparatus.

5           20.   A system as defined in Claim 19, wherein said  
data stored in said memory represents said calling facsimile  
number of said calling facsimile apparatus in association  
with a plurality of called facsimile numbers including the  
facsimile number of said called facsimile apparatus, each of  
10 said facsimile numbers being previously designated with a  
time parameter, and said communications controller selects  
facsimile numbers from among said plurality of said called  
facsimile numbers based on said time parameter and additional  
time information corresponding to said time parameter so as  
15 to cause said different gateway apparatus to initiate a call  
to facsimile apparatuses using said selected facsimile  
numbers.

          21.   A system as defined in Claim 20, wherein said  
20 time parameter includes arbitrary transmission start and  
arbitrary transmission completion times and said additional  
time information includes a call acceptance time.

          22.   A system as defined in Claim 19, wherein said  
25 communications controller performs a new registration and

changes the contents of registration in said memory in  
accordance with an instruction from said calling facsimile  
apparatus.

5           23.   A system as defined in Claim 19, wherein said  
facsimile communications protocols includes G3 facsimile  
protocols.

          24.   A system as defined in Claim 19, wherein said  
10   packet format includes a TCP/IP packet format.

          25.   A computer readable medium storing computer  
instructions for performing the steps recited in anyone of  
Claims 13 - 18.

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